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# Why Certified Milk Is Not Good Enough

*and*

## What Should Be Done To Eliminate Its Defects

*By*

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# *Why Certified Milk Is Not Good Enough*

Ordinary methods of treating all grades of milks have not been in harmony with the latest developments in science. This statement applies to certified milk as well as to grades A and B.

It is generally assumed that so-called "certified" milk is superior to all other grades. Perhaps that claim is sound as related to most other grades of milk, but it may not be sound in connection with all milks, especially if accidental conditions have been against certified milk, and in favor of special outputs of pasteurized milk. I desire to make this point clear.

In giving the reasons why so-called "certified" milk is not good enough, let me at once state that I approve of all known practices whereby cows' milk intended for infant feeding, is protected from every form of damaging contamination, or degrading influence, whether in the form of bacterial infections, absorbed putrid gases, or other volatile matters, atmospheric dust, incubations of primary infections, dead bacteria, liquid solutions or any form of filth, or chemical changes. But I desire to point out that something more should be done in improving ordinary "certified" milk.

The highest degree of cleanliness should be a requirement in the production of milk for babies; and also, for all others who can afford to pay for the cost of good milk.

Ordinary common sense should indicate that in so vital a matter as food purity; milk, cream and butter should be as free from all objectionable constituents as is practically possible; for they are the most nutritively important of foods, and notwithstanding that cows' milk is not an ideal food for human beings.

Furthermore, it is easily practically possible that such higher excellence of character in milk can be secured at prices no higher than what have to be charged for ordinary grade A milk. But in the ordinary methods of producing and distributing even so-called "certified" milk, such improved character is not sufficiently effected as to gain the utmost sanitary certainty and edible excellence.

## *Defects in Certified Milk*

One defect of character usual in "certified" milk, is because it has not been exhaustively purified from the diffusive excretory gaseous matters that are produced in the cow's body, including the sebaceous glands of the cow's hide. The gaseous fumes that are given off by the cow's warm hide contaminate the atmosphere that surrounds every cow in and outside of her stable; and especially, in cows that are kept in large herds. This gaseous matter is inbreathed by the cows, is transferred to the cows' food, is absorbed in the cows' blood, and is transferred to the milk at the moment of its production. In very large herds the atmosphere in and around the cows' stable is tainted with such matters for long distances from cow-stables and yards. The stable atmosphere breathed by cows in winter is generally highly contaminated with such gaseous contaminants.

"Certified" milk as well as all other milks becomes more or less infected with bacteria of putrefactive and other types. Bacterium coli is sometimes found in "certified" as well as in other milks, and there is no known way of finding out whether such bacteria are of typhoid or of ordinary intestinal origin. It is practically impossible to sterilize the hands of milkers; and milking machines are usually market-milk infectors.

Pathogenic infections may accidentally occur with certified as well as with other milks, and frequently do occur, notwithstanding all possible care.

In the ordinary aeration and cooling of milk, atmospheric infections have always been occurring in the past.

At the ordinary temperatures at which milk has been held prior to and during its transportation and distribution, primary infections incubate; and none of those incubations excrete matters that can be known to be absolutely harmless. Some of them are known to be virulently poisonous. If those incubations do occur, and they have always occurred in milk unless the milk was pasteurized or the bacteria otherwise destroyed *before* the incubations began.

The incubated bacteria may have dangerous effects if consumed in living form; and if the incubative bacteria are destroyed before being consumed, so-called protein split decomposition poisons are liberated from the bacterial protein molecules. It is now known that such decomposition products may be even virulently poisonous.

Undestroyed primary infections tho small, may become large incubated infections in relatively short time.

## *What should be done to improve so-called Certified Milk*

To overcome defects in "certified" milk, calls for added practices which can be applied by using the Robinswood Farms methods and apparatus; which in use, apply the following principles:

All milk should be exhaustively aerated in an atmosphere that has been freed from atmospheric sources of infection.

All milk should be properly pasteurized before any incubation of its infections has begun.

All milk should be held before and during distribution at substantially non-fermentative temperatures. Icing temperatures are not sufficiently effective.

Infants' milk in particular, should be so securely packaged that infections of such milk will be practically impossible during its transportation and distribution.

N. B.—There is no evidence in existence going to show that moderate pasteurizing-heating of really clean milk, destroys vitamens or enzymes, But if it does, the amount of such heating damage is negligible, and can be counteracted by a dietary addition of fruit juices, spinach or carrots.

While admitting theoretically that raw milk is more easily digested than heated milk; as a matter of fact, in domestic practice substantially all infants' milk has had part of the milk consumed, heated above animal temperature. The risks taken from accidental infections and of incubations of primary infections that always occur in milk more or less, and the decomposition of such incubations, are far greater than would be experienced from a properly managed pasteurization applied to the milk before incubation of the primary infections has occurred.

Dr. Henry L. Coit, the father of the clean milk government, before his death admitted that milk for infants should be pasteurized. Dr. Abram Jacobi said, "Drink no raw milk." In Europe all milk is boiled; and in a nine months' test, it nourishes babies better than mothers' milk, tho for short tests following birth, mothers' milk acts best.

It should not be forgotten that cows' milk is not an ideal food for human beings. The best treatment that can be given to it, is none too good to be practiced.

Producers and distributors interested in "certified" milk will be gladly given full information of the advances made at Robinswood Farms in treating milk for all purposes, as well as for making butter of unquestionable sanitary character, by addressing the Pan-American Dairy Company, at the Company's Home Office, East Orange, N. J.

# *To My Medical Confreres*

It is not a pleasant matter when one professional brother takes a step in advance of the entire profession, and feels obliged to insistently point out that the entire medical world has been basing its recommendations in practice to a considerable extent, on erroneous conclusions. This is my rather burdensome duty to have to declare. Necessarily, it not only hurts the *amour propre* of one's professional brothers; but it also seriously engenders disorganization of business among those who have vested commercial interests, thru adverse criticism to a certain degree. Every one admits that up to lately, the producers of "certified" milk have done the best that the world has known how to do. Still, it should be borne in mind, that science is a matter of progressive growth; and that it is only relatively a few years ago that medical science had its real beginning.

Those individuals who have their minds running in fixed ruts, do not like to be asked to take new lines of thought. Nevertheless, we of the medical profession are under moral obligation to change our thought when new evidence of sufficient weight is brought to light, to warrant such change. *Noblesse oblige.*

I have presented my conclusions to over one hundred of the most eminent dairy scientists of the United States, and have had published many articles in scientific journals, but as yet, have not received one word of adverse criticism. On the contrary, I have received considerable laudation. Naturally, it will take some time to bring the whole world to such a change of practice as I advocate, and to secure the education of the consuming public to know what constitutes the highest sanitary character in milk, cream and butter.

It may be of interest to pediatrists, producers, and others who are interested in "certified" milk, to acquire full understanding of the reasons for the various steps that I have taken experimentally and in research work to arrive at my conclusions relating to the sanitary character of dairy products. I have reprints of the following publications, which I will be glad to forward on request; viz:

1. Forty of Many Reasons Why the Public Supplies of Milk, Cream and Butter are Not Good Enough.

2. A Practical Plan for Securing Entire Assurance as to Safety, Wholesome Character and Highest Edible Excellence in, as Well as Reduction in Cost of Public Supplies of Milk, Cream and Butter.

3. The Relation of Low Temperature Fermentations to Sanitary Character in Milk.

4. Milk Bacteria Which Proliferate Before, and Those Which Survive Pasteurization. New Methods Applied to Meet an as yet Unremoved Menace.

5. Relating to the Possibility of Protein Split Product Poisons Being Formed in Producing Market Milk.

6. The Special Treatment That Should be Given Milk Intended for Infant Feeding.

7. Temperature Control as Related to Improvements in Milk, Cream and Butter Supplies, and How It Should be Applied.

8. Why the Public Supplies of Milk and Butter are Not Good Enough.

9. The Robinswood Farms Quick Lock Milk Bottle.

10. Requirements That Must be Met in Producing Highest Character in Milk, Cream and Butter.

11. Robinswood Farms Methods and Means for Making Butter.

12. Lately Devised Robinswood Farms Apparatus and Methods.